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July 24, 2014

Via FOIA Online

National Freedom of Information Officer
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW (2822T)
Washington, DC 20460
Facsimile: (202) 566-2147

Re: Freedom of Information Act Request for Records Concerning the Use of Simple Linear Regressions and Change Point Analyses to Derive Nutrient Criteria

To Whom This May Concern:

This is a request for a public records pursuant to the Freedom of Information Act ("FOIA"), 5 U.S.C. Section 552, as implemented by the Environmental Protection Agency at 40 C.F.R. Part 2. For purposes of this request, the definition of "records" includes, but is not limited to, documents, letters, memoranda, notes, reports, e-mail messages, policy statements, data, technical evaluations or analysis, and studies.

Background

Water quality criteria are required to be developed using scientifically defensible methods (see, 40 CFR 131.11). On April 27, 2010, the Science Advisory Board ("SAB") completed its review of EPA's 2009 guidance document entitled *Empirical Approaches for Nutrient Criteria Derivation*. Based on the recommendations made by the SAB, EPA revised and finalized its guidance in November of 2010. The new document is entitled *Using Stressor-response Relationships to Derive Numeric Nutrient Criteria* ("Final Guidance"). As it concerns simple linear regressions ("SLR") the Final Guidance states that a "stressor-response relationship estimated by SLR… is not applicable to deriving water quality criteria for nutrients because adverse effects to the designated use of a waterbody occur at concentrations of N and P below the level that is shown to be toxic to organisms." Final Guidance § 4.1.3. Moreover, with regards to nonparametric changepoint analysis ("nCPA" or "changepoint analysis"), the Final Guidance cautions

that data and *a priori* ecological knowledge should indicate "that a threshold exists prior to applying nCPA because nCPA will identify a change point regardless of whether or not one truly exists." Final Guidance § 4.2.4. EPA has also indicated that when using stressor-response methods, an analysis of "confounding factors analysis" must be completed to ensure that the regression is reliable in predicting the intended response to nutrient controls. Specifically, "[t]he possible influences of confounding factors are the main determinants of whether a statistical relationship estimated between two variables is a sufficiently accurate representation of the true underlying relationship between these two variables." Final Guidance § 5.1.

Request

We request copies of the following records developed by EPA *since the Final Guidance was issued in November 2010*:

(1) Any other guidance or records that advise with regards to when it is scientifically defensible to utilize either simplified linear regressions or change point analyses when developing nutrient criteria for streams or lakes.

(2) Any guidance that describes the scope and content of the confounding factors analysis that should be used to verify the reliability of the nutrient relationships developed using the stressor-response methods.

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Please contact the undersigned if the associated search and duplication costs are anticipated to exceed $250.00. Please duplicate the records that are responsive to this request and send it to the undersigned at the above address. If the requested record is withheld based upon any asserted privilege, please identify the basis for the non-disclosure.

If you have any questions regarding this request, please do not hesitate to contact this office so as to ensure that only the necessary document is duplicated.

Respectfully,

Alexander J. E. English
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